

UMBRELLA SAFETY AND ALARM ENHANCING DEVICE

BACKGROUND OF THE INVENTION

(a) Field of the invention

The present invention relates to an umbrella safety and alarm enhancing
5 device, particularly to an enhancement device on an umbrella to provide electro
luminescence flashing and alarm functions at nighttime to ensure user's safety.

(b) Description of the Prior Art

The conventional umbrella is designed to protect people from rain. Umbrella
manufacturers have been trying to make improvement on the sturdiness and
10 convenience of umbrella structure. However, car accidents do happen at night
because of poor visibility, especially when it is raining. Accidents do happen
when motorists could not see walking pedestrians carrying an umbrella at night.
FIG.1 shows a light-emitting device using an LED lamp 10 fitted on the ferrule of
an umbrella, which has been granted a patent. But the light-emitting range of the
15 LED lamp 10 on the ferrule of an umbrella is quite limited. In addition, the LED
lamp 10 is a long-wave light that could easily be obstructed in a raining or foggy
condition. In times of heavy rain or wind, the user would try to incline the
umbrella in the direction of the rain or wind. As a result, the LED lamp 10 on the
ferrule is also inclined to the front of the user. Then, the light on the ferrule could
20 not be seen from the back of the user. Therefore, the motorist coming from
behind the user could hit him because the driver could not see the light on the
umbrella. Another design has been disclosed in another patent, involving a coat
of luminescent compound coated on the canopy of umbrella (not shown), which
absorbs lighting energy at daytime and gives out luminescent alarm at night. This
25 type of lighting has poor lighting efficiency at night, and could not achieve the
purpose of indicating alarm to a distant motorist.

SUMMARY OF THE INVENTION

In view of the foregoing shortcomings, the present inventor has dedicated in seeking improvement, based on many years of experience in the field, and after
5 repeated experiments and tests has finally come up with an alarming and lighting enhancement design for umbrella with a large range for alarming and lighting effects, high safety and without dead angle, enabling lighting and alarming effect to a distant motorist, providing safety for pedestrians.

For full understanding of the construction, design, objectives, approach and intent
10 of the present invention, please refer to the following drawings and description of preferred embodiment.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a schematic view of a conventional umbrella having an LED lamp on the ferrule of an umbrella according to the prior art.

15 FIG. 2 is a schematic view of the present invention with lighting on the canopy of an umbrella.

FIG. 3 is a sectional view of part of the present invention of umbrella.

FIG. 4 is a top view of the present invention of umbrella with lighting on the canopy of umbrella.

20 DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring to FIG.2 and 4, the present invention of umbrella safety and alarm enhancement device is characterized by the installation of electro luminescence wires 50 on the rim of an umbrella canopy, which is capable of giving a large range of strong lighting alarm on a rainy night. Referring to FIG 3, the present
25 invention comprises a channel 202 installed on an upper part of the hollow of the umbrella shank 201. A control unit 30 and a battery compartment are installed

inside a handle 3. A power cord 301 for the control unit 30 extends upward inside the shank 201 and out of the channel 202, along the umbrella rib to the rim of the canopy to join with the electro luminescence wire 50; referring to FIGS. 2 and 4, the electro luminescence wire 50 is installed along the rim of the canopy. The
5 electro luminescence wire 50 is serially connected to no less than one electro luminescence plate 501 to provide reinforced alarming effects.

The canopy 200 of the umbrella or the rim of the canopy 200 can be made of transparent material to enhance the lighting alarm of the electro luminescence wire 50 and the electro luminescence plate 501.

10 Referring to FIG. 3, the control unit 30 inside the handle 3 of the umbrella activates the electro luminescence wire 50 to emit or flash light. The light source emitted from the electro luminescence wire 50 is short wave that is free from obstruction by rain or fog. The electro luminescence light could be seen without any dead angle when the user holds the umbrella at whatever angle. So, it has
15 high visibility to prevent accidents.

As described above, the construction of the present invention is quite simplified and costs low, capable of giving a wide range of strong lighting alarm without dead angle, free from obstruction by rain or fog, and high visibility to prevent accident. The present invention has never been used in public, and has
20 satisfied the requirements of applicability and novelty for a patent right. Therefore, this application is filed. Your favorable consideration will be appreciated.

It is to be understood that the foregoing description involves only preferred embodiments of the present invention, and that all modifications or variations
25 deriving from the above description without departing from the intent of the description and drawings shall be included in the following claim.